



The FCC Must Stop the Spread of Non-Interoperability in the U.S. Mobile Market

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Non-interoperability of mobile devices, i.e., in its ultimate form their exclusive connectivity to only one operator's network, is moving rapidly and inexorably along a path to become an exceptional¹ and widespread feature of the mobile broadband market in the U.S. If this outcome is allowed to happen it will violate the principle embedded in the U.S. telecommunications environment since the Communications Act of 1934 that customers should be able to connect any device to any network, universally and ubiquitously, subject ONLY to limitations specifically designed to avoid harm to the network or to other users. Non-interoperability, currently being promoted and deployed by AT&T and Verizon Wireless rolls back time to before the FCC's Carterfone decision in 1968 that confirmed and reinforced the right of customers to attach any compatible device to any network. This right supports two indispensable values:

1. *Creativity* in terms of the devices and the applications and services available to customers through the use of innovative network connected devices developed by multiple entrepreneurs not controlled by the network operators themselves; and
2. *Sharing* as result of customers' guaranteed freedom to share information and ideas freely with other customers, and third parties, independently of the networks they are connected to and the devices they are using.

Currently, interoperability is under attack from the two major mobile (and fixed) operators in the U.S., beginning with their exploitation of non-interoperable LTE-based wireless networks in the 700 MHz Band (Band classes 17 and 13 respectively). We will not relate here the history and events behind the introduction of this non-interoperability. They have already been amply exposed in the course of this Docket. They have led to an estimated 30 million or so non-interoperable (predominantly iOS- and Android-based) devices in service as of end-2012.

At this point, absent prompt and decisive action by the Commission, it is clear that non-interoperability is on the verge of becoming a permanent, inescapable, widespread and exceptional characteristic of the U.S. wireless market over the next few years to the detriment of the interests of customers, the effectiveness of market competition, and the stimulation of innovation by new companies. Non-interoperability has, and will have, increasingly adverse consequences for the prices customers are

¹ Unique to the U.S. among major markets (Canada and the Caribbean are being dragged into a comparable situation by their proximity to, and dependence on, U.S. spectrum allocations).



charged, the eventual economies of scale and timeliness of device development and supply for the U.S. market, and national and international roaming arrangements.

The trend toward non-interoperability is embedded in and being pushed by the mid- and long-term plans of Verizon and AT&T. In this brief Comment we will refer specifically to Verizon's initiatives. Verizon's steps to expanding the scope and impact of non-interoperability include its announced intention to offer LTE-only devices² and to exploit carrier aggregation in future LTE investments as specified in LTE-Advanced³. Carrier aggregation, for example between Band Class 13 (or 17 in the case of AT&T), and the AWS band, will extend the effects of non-interoperability into the latter band which is itself interoperable. Multiple operators in the Americas, including the U.S., have deployed and will deploy LTE in the AWS band, creating a healthy environment for competition and roaming possibilities. But none⁴ will offer carrier aggregation with Band Class 17 or 13 and its accompanying increases in performance, such as the average and peak speeds customers will enjoy.

For their part, LTE-only devices will not even offer the fall-back compatibility that multi-mode devices, e.g., LTE/HSPA designed for AT&T's networks or LTE/CDMA designed for Verizon's networks, can provide to customers who may be attracted to a device because of its special features, and are willing to use it with a competing operator even if its full communications capabilities are not then available.⁵

Both AT&T and Verizon are championing versions of carrier aggregation in the global LTE standards body 3GPP that apply only to them, i.e., are not even U.S- but single carrier-specific⁶, since they include their respective Band Classes 17 and 13. These efforts represent a continuation of the spirit of AT&T's original initiative to use this global standards body to introduce a standard (Band Class 17) that only applied to the U.S., without involving other key U.S. stakeholders, including the Commission itself at that time (2008).

Through their pursuit and planned expansion of non-interoperability, the two major U.S. mobile operators are mounting a concerted attack on one of the most precious and fundamental values and

² "Verizon hints at LTE-only phones in 2014 to lower subsidies," http://news.cnet.com/8301-1035_3-57572505-94/verizon-hints-at-lte-only-phones-in-2014-to-lower-subsidies/

³ Mike Haberman, Vice President Network Engineering, Verizon Wireless, "...in 2014 the carrier will use carrier aggregation technology to combine data transmissions over its AWS and 700 MHz spectrum to improve speeds and capacity," http://www.fiercewireless.com/story/verizon-almost-50-data-traffic-now-goes-over-lte-network/2013-01-09?utm_campaign=TwitterEditor-FierceWireless

⁴ There may be minor exceptions in Canada depending on the outcome of its 700 MHz auction which as of this writing is unclear – this auction has just been postponed from November 2013 until January 2014

⁵ For example T-Mobile reported that there were 1.7 million unlocked iPhones on its network before it offered iPhones itself even though T-Mobile did not offer HSPA services on the same frequencies as AT&T so its customers could only exploit its Wi-Fi hot spots or slow 2G data services - "T-Mobile could get iPhone in 2013," <http://www.bizjournals.com/atlanta/blog/atlantech/2012/12/t-mobile-could-get-iphone-in-2013.html>

⁶ They may also eventually include much smaller operators than either of them in Canada and the Caribbean depending on the outcomes of spectrum awards in the 700 MHz band in these countries; Latin America is following the Asian 700 MHz band plan, not the U.S. plan.



principles that have guided and sustained the growth and development of U.S. telecommunications for the benefit of consumers, businesses and other users of network services and the U.S. economy since the days of voice-dominated communications to today's era of the broadband Internet.

Only the Commission can reverse this momentum toward an increasingly non-competitive market environment in which the freedom of choice of customers and the ability of innovators to bring new devices, applications and services to commercial reality, will become subject to the unchallengeable vetoes and decisions of the largest U.S. operators.